

Name (please print): **ANSWER KEY**

Math 250 Quiz 1, Monday 8 September 2008, 1 page, 20 points, 20 minutes

(1 points) How many members does the set $S = \{\emptyset, \{\emptyset\}, \{\emptyset, \{\emptyset\}\}$ have?

3

(6 points) With S defined as above (check one box in each row):

(check one box in each column):

	$\emptyset \in S$	$\emptyset \subseteq S$	$3 \in [2, 4)$	$3 \subseteq [2, 4)$	$\{3\} \in [2, 4)$	$\{3\} \subseteq [2, 4)$
true	V	V	V			V
false				V	V	

(4 points)

$$[0, 8) \setminus [6, 13) = \mathbf{[0, 6)}$$

$$[0, 8) \cap [6, 13) = \mathbf{[6, 8)}$$

(9 points) Draw a Venn diagram and shade the indicated area.

$(Q \cup R) \setminus S$

$(Q \cup R) \cap (R \cup S) \cap (S \cup Q)$

$(Q \cap R) \cup (R \cap S) \cup (S \cap Q)$

